

January 19, 2001

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ATTORNEY GENERAL

JAN 24 2001

ENVIRONMENTAL



Ms. Rosemarie Cazeau, Chief
Environmental Bureau
Assistant Attorney General
188 W. Randolph St., 20th Floor
Chicago, IL 60601

Dear Ms. Cazeau:

Re: Mercury Regulator Removal Procedure

This is in response to your letter of December 21, 2000. Ameren has revised its Mercury Handling Procedure to address the concerns of the Task Force, and we have enclosed a copy for your further review.

At the Task Force's recommendation, we have also reviewed the AGA's web page. Ameren believes its procedure addresses all of the requirements suggested by the AGA.

We again seek your approval of our procedure so that we can proceed with the removal of the very few pressure regulators containing mercury that Ameren has identified within its system.

Sincerely,

A handwritten signature in black ink, appearing to be "J. L. Davis".

J. L. Davis
VP, Gas Operation Support

JLD:nls



GAS POLICY

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| Subject: Mercury Handling Procedure | | Supersedes: |
| | | Effective Date: |
| Reference: | | Approved By: J. L. Davis |
| Applies To: <input checked="" type="checkbox"/> AmerenCIPS <input checked="" type="checkbox"/> AmerenUE/IL <input checked="" type="checkbox"/> AmerenUE/MO | | |

General

It has been determined that exposure to mercury may cause a number of serious health problems. Such exposure can occur from breathing mercury vapor, ingesting mercury with food, absorption through skin contact, or absorption through eye contact. Extreme care must be exercised when handling free mercury or when removing or handling devices containing mercury, where the design of the device is such that mercury spillage may occur. After final approval of this Gas Policy, these Mercury Handling Procedures will be followed any time employees or contractors remove or handle devices containing mercury that are associated with the distribution of natural gas.

Mercury Use In the Gas Industry

Historically, mercury has been used for many different purposes in the gas industry. Such uses include gas pressure regulators and relief valves, electric switches, thermostats, thermometers, manometers, recording temperature gauges, orifice meters, electronic correctors, remote metering units and other devices. In modern applications such as use in "mercury wetted switches", mercury is present in very small amounts in sealed containers. As such, it is unlikely to result in a serious health threat.

Use of mercury in gas pressure regulators, however, is of major concern because the mercury is not in a sealed container. Consequently, the mercury may be expelled from the regulator through operation of the regulator's relief valve, or the mercury may be spilled while the regulator is being serviced or removed.

Ameren companies have used gas pressure regulators containing mercury in the past, but have maintained longstanding policies to remove such regulators from service when encountered. It is possible that some gas pressure regulators containing mercury may have been missed in the past system-wide surveys that have been conducted. Therefore, vigilance must be maintained to ensure that any remaining regulators of this type are identified and removed from service under the procedures outlined in this policy.



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General Policies Regarding Handling, Servicing or Removing Devices Containing Mercury Associated with Ameren's Gas Operations

- 1) Meter readers, gas service personnel, other employees and contractors who work on customer property shall be trained to recognize gas pressure regulators containing mercury. See Gas Policy 8 (Meter Header Inspection) for instructions regarding how to identify these regulators.
- 2) Any employee or contractor finding a gas pressure regulator containing mercury shall notify the Gas Supervisor immediately. The Gas Supervisor shall notify the Gas Training Staff. **Do not remove or disturb the regulator until authorized to do so.**
- 3) No employee or contractor shall remove or handle a gas pressure regulator containing mercury until they have been familiarized with the hazards of mercury, are familiar with all procedures contained in this policy, and given access to a mercury MSDS. In addition, site-specific training will be required to ensure that those employees or contractors that conduct home screenings, regulator removal, spill clean-up and final clearance are qualified.
- 4) Manometers containing mercury will not be used for any purpose. If any manometer containing mercury is found, it shall be disposed of using the procedures contained in this policy.
- 5) Removal or replacement of "mercury wetted switches" or other components containing mercury in electronic correctors, metscan remote reading devices or other instruments shall not be done on customer property. Such work will be done by trained personnel at the company's gas meter shops or returned to the vendor for repair.
- 6) Electronic correctors, metscan units and other devices containing small amounts of mercury in sealed containers shall not be installed indoors.
- 7) If any sealed container containing mercury used in electronic correctors, metscan units or other devices should be ruptured, the event shall be considered a mercury spill and dealt with in the manner prescribed later in this policy.
- 8) Except for mercury being processed for disposal under this policy, no free mercury shall be present on company property including company owned vehicles.
- 9) The Company's Environmental, Safety and Health Department will provide oversight and guidance for handling and disposal of mercury and for dealing with mercury spills.



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Procedures for Removing a Gas Pressure Regulator Containing Mercury

To ensure the safety of our customers, employees and contractors the following procedure must be followed when removing a gas pressure regulator containing mercury.

- 1) Before removing the regulator, personnel involved must have and use the following equipment.
 - An appropriately sized DOT approved shipping container: 5-gal plastic bucket (Stock Number 22-08-272), 30-gal steel drum (non-stock), or 55-gal steel drum (Stock Number 22-08-252).
 - A plastic bag (Stock Number 49-03-163 or Number 49-03-162) and plastic sheeting (Stock Number 49-06-201) (each at least 6 mil thick).
 - Canvas gloves (Stock Number 49-04-294) to be worn over nitrile gloves (Stock Number 49-04-553).
 - Chemical goggles (Stock Number 49-04-163).
 - Polylaminated Coveralls CPF2 without hood or shoe covers – x-large (Stock Number 49-17-035) or xx-large (Stock Number 49-17-036).
 - Neoprene work shoe covers – medium (Stock Number 49-25-046), large (Stock Number 49-250-047), or x-large (Stock Number 49-25-048)
 - Wheeled pipe cutter and/or hack saw.
 - Various sized expander plugs and plug installation tool.
 - Threaded caps, plugs, and appropriate wrenches.
 - Polyurethane expansion foam.
 - Replacement regulator and pipe fittings.
- 2) A Gas Operations Support Quality Assurance Inspector will be assigned to the site to oversee the removal process.
- 3) A Safety Briefing must be completed at the job site before the work begins to discuss hazard and protective measure that will be used to protect the employee or contractor.
- 4) If the work involves removal of a regulator containing mercury from the living space of a residence (including unfinished basements), a visual and instrument screening of the

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residence will be conducted before the work begins. If this screening reveals evidence of a mercury spill, proceed to the spill procedures below.

- 5) Place the plastic sheeting on the ground or floor below the regulator to protect against a potential spillage of mercury. Place DOT approved shipping container on plastic sheeting and place the plastic bag inside the container as a liner. Put on disposable clothing, canvas or leather gloves over nitrile gloves, and chemical goggles.
- 6) Shut off gas supply to the regulator by turning off the meter valve, if available, or shutting off the gas service at the main. Vent the meter set piping by removing the gas meter. **Do not** remove the mercury well from the regulator.
- 7) Drill a ¼" hole in the top or side of the relief vent piping approximately 3" from the diaphragm casing. Inject a small quantity of polyurethane expansion foam into the ¼" hole to seal the piping.
- 8) Carefully remove any relief piping by cutting at the ¼" hole with wheeled cutters if possible. Otherwise, use a hacksaw or loosen threaded fittings with wrenches, being careful not to jar the regulator. After cutting, verify that the open end is completely plugged. If not, cap or plug the open end.
- 9) Carefully remove the entire regulator from the meter set by cutting the inlet and outlet piping with wheeled cutters if possible. The regulator can be unthreaded off the riser as long as the regulator remains stable to avoid spilling the mercury. Both the inlet and outlet of the regulator must be plugged or capped.
- 10) Taking care to keep the regulator in a level and upright position, place the regulator in the plastic bag inside the DOT approved shipping container. Seal the bag and place inert packing material, such as scrap wood, styrofoam, etc. around the regulator to stabilize it in a level and upright position.
- 11) Remove gloves and disposable clothing. Place them into the DOT approved shipping container for disposal and seal the container lid.
- 12) If the work involves removal of a regulator containing mercury from the living space of a residence (including basements), a second visual and instrument screening will be performed at this point. (Before removal of the shipping container from the residence). If this screening reveals evidence of a mercury spill, proceed to the spill procedures below.



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- 13) Remove the DOT approved shipping container from the customer's property and place it in the back of the service truck in a secure and stable position.
- 14) If the work involves removal of a regulator containing mercury from the living space of a residence (including basements), a final visual and instrument survey will be conducted at this point. If this screening reveals evidence of a mercury spill, proceed to the spill procedures below.
- 15) The DOT approved shipping container with regulator and any disposable clothing inside shall be labeled appropriately and held for shipment to an approved disposal facility as directed by the company's Environmental, Safety, and Health Department.

Removing Device Components That Contain Mercury

The removal or replacement of device components that contain mercury, such as thermometers, thermostats, or switches should be done according to the following procedures: **Note: If there is visible evidence of spilled mercury, proceed to the spill procedures below.**

- 1) Before removing the mercury containing component, the employee must have and use the following equipment:
 - An appropriately sized DOT approved shipping container: 5-gal plastic bucket (Stock Number 22-08-272), 30 gal steel drum (non-stock), or 55 gal steel drum (Stock Number 22-08-252).
 - A plastic bag (Stock Number 49-03-163 or Stock Number 49-03-162) and plastic sheeting (Stock Number 49-06-201) (each at least 6 mil thick).
 - Nitrile gloves (Stock Number 49-04-553).
 - Laboratory coat – large (Stock Number 49-04-948) x-large (Stock Number 49-04-949).
 - Chemical goggles (Stock Number 49-04-163).
- 2) Put on disposable clothing, nitrile gloves, and chemical goggles.
- 3) If the mercury is in a sealed glass ampoule, sealed compartment, or other sealed unit within the device, remove the sealed unit and place it in the plastic bag. If the sealed unit cannot be removed without releasing mercury, remove the entire device and place



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it in the plastic bag. Use care during removal to be sure the mercury-containing unit is not broken, or that the mercury is not spilled in some other manner.

- 4) Seal the bag and then place in the DOT approved shipping container and secure lid. Remove gloves and disposable clothing. Place them into a DOT approved shipping container for disposal.
- 5) Examine the area around the device for free mercury that may have been spilled. If mercury is observed, or mercury was spilled during device replacement, refer to the spill procedures below.
- 6) The DOT approved shipping container with the mercury containing item inside should be labeled appropriately and held for shipment to an approved disposal facility as directed by the company's Environmental, Safety, and Health Department.

Mercury Spill Procedures

- 1) Whenever mercury is spilled, the spill area should be secured and cordoned off to prevent people from being exposed. If mercury is flowing toward a drain or other floor opening, such drain should be diked to prevent the mercury from entering the floor opening. If the mercury is on top of the plastic sheeting, curl up the edges to prevent it from running off.
- 2) After securing the area leave immediately.
- 3) If mercury contacts the skin or eyes, flush with large quantities of water. If breathing is difficult move into fresh air. Administer oxygen if breathing does not improve or coughing persists.
- 4) The spill shall be reported **immediately** to your supervisor, the Gas Training Center Staff and to the Environmental, Safety, and Health Department at 314-554-2378.
- 5) Any plastic sheeting contaminated with mercury shall be carefully curled up and folded to prevent mercury from running off. Such plastic sheeting will then be placed in a plastic bag (Stock Number 49-03-163 or Stock Number 49-03-162). The plastic bag shall then be placed in the DOT approved shipping container.
- 6) Remove any clothing that contacted mercury and seal in a plastic bag (Stock Number 49-03-163 or Stock Number 49-03-162).

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The Environmental, Safety, and Health Department will immediately arrange for expedient removal of any free mercury and any contaminated soil, gloves, or other articles that may have contacted the mercury by using company employees or a specialized contractor. The contaminated waste will be disposed of as either hazardous waste or special waste depending on the amount of mercury spilled.

Transportation Procedures

- 1) All mercury removed from the gas system will be transported by a gas utility truck directly to the appropriate storeroom and held for shipment to an approved disposal facility as directed by the company's Environmental, Safety, and Health Department.
- 2) All shipping containers with devices (including regulators) containing mercury shall be marked with the following label in large black lettering:

**Mercury Contained in Manufactured Articles, 8, UN2809, III
Corrosive, Class 8**

- 3) All shipping containers with bottles of clean mercury shall be marked with the following label in large black lettering:

**Mercury, 8, UN2809, III
Corrosive, Class 8**

- 4) In addition, all containers will also be marked with a "corrosive" 4" x 4" pressure sensitive DOT sticker (Stock Number 16-04-185).
- 5) A completed Hazardous Materials Bill of Lading (Stock Number 37-21-418) shall also accompany the container. The Bill of Lading should show the same shipping description used to label the container.

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- 6) Prior to transporting, care should be taken to secure the contents within to prevent excessive jarring, or tipping. The lid of the container shall also be tightly fastened.
- 7) Notify the receiving location prior to delivering the container.
- 8) The receiving storekeeper will be instructed to contact the Environmental, Safety, and Health Department for further instructions.